

Solid Waste Section

March 18, 2016

Mr. Tim Rogers
Solid Waste Director
460 B South Landfill Road
Dudley, NC 28333

Re: Comments on Permit Amendment Application (Permit Application)
Wayne County Landfill Facility, Wayne County, North Carolina
Permit No. 9606-MSWLF-1998, Document ID No. (DIN) 25782

Dear Mr. Rogers:

On January 13, 2016 the Division Waste Management (DWM), Solid Waste Section (SWS) received the Permit Amendment Application titled as:

- “Amendment to Permit – Municipal Solid Waste And Construction And Demolition Landfill Facilities.” Dated January 2016. Prepared by Municipal Engineering Services Company, P.A. (MESCO) [DIN 25494].

Wayne County (the County) submitted the Permit Amendment Application for requesting an approval for a continued operation of the following landfill units at Wayne County Landfill Facility:

1. Wayne County Municipal Solid Waste Landfill (MSWLF) unit, Permit No. 9606-MSWLF-1998, Phases 1, 2, 3, and 4. The MSWLF-Phase 4 is a vertical expansion.
2. Wayne County Construction and Demolition Debris Landfill (C&DLF) unit, 9601-CDLF-1997, Phases 1, 2, and 3. The C&DLF is located on top of the closed, unlined MSWLF (Unit 2), which is subject to the ongoing groundwater corrective action.
3. Wayne County Land Clearing and Inert Debris Landfill (LCDILF) unit and other non-disposal solid waste management units.

Pursuant to the North Carolina Solid Waste Management Rules (Rule) 15A NCAC 13B, Article 9 of the Chapter 130A of the North Carolina General Statutes (NCGS 130A-290, et seq.), and the permit conditions for landfill units (DIN 19025 & 16640), the SWS has conduct a review on the Permit Amendment Application. The comments on the Permit Amendment Application are stated below. Your timely responses to the comments will expedite the completion of the reviewing processes.

General

1. The North Carolina Department of Environmental and Natural Resources (DENR) officially became the Department of Environmental Quality (DEQ) on Sept. 18, 2015

when Governor McCrory signed the 2015-2016 state budget into law. Please use the correct department name or its acronym NCDEQ throughout the Permit Application.

MSWLF Unit (9606-MSWLF-1998)

Engineering Plan

2. (Section 1.1) According to the Permit to Construct Application for the MSWLF – Phase 3 (DIN 14016) approved on June 13, 2011, the combined capacity of Phases 1 through 3 is 2,327,598 cubic yards (CY) which is summarized below:

Phase	Acreage	Air Space (CY)
1	23	1,100,000
2	21	685,711
3	21	541,887
Total	65	2,327,598

However, the Phasing Table in Section 1.1 (on Page 7) of the Permit Application states the combined capacity of Phases 1 through 3 is 2,538,681 CY.

- i. Is the landfill unit overfilled than the approved capacity of 2,327,598 CY?
 - ii. What is the in-place waste volume (in CY) of the MSWLF unit according to the latest survey data in 2015?
3. (Section 1.1) As described in the Permit to Construct Application for the MSWLF – Phase 3 (DIN 14016) approved on June 13, 2011, the MSWLF unit has the approved total capacity of 5,365,695 CY, which is defined as the volume measured between the bottom of waste (or the top of the protective cover of landfill base system) and the top of the final cover of the landfill unit including the volume of daily cover and final cover system. To avoid any confusion, please define the approved total capacity in the Section.
4. (Section 1.1.7) Please add the following requirements to the subsection:
- i. The 20-year leachate disposal agreement – Utility Agreement between the County of Wayne and the City of Goldsboro will expire on March 3, 2020.
 - ii. The County must submit the SWS a copy of the renewal leachate disposal agreement on or before March 3, 2020 to retain the life-of-site permit of the MSWLF unit.

Operations Plan

5. (Section 2.1, On Page 40) Please address the following concerns:

- i. The program for corrective actions of leachate breakouts is placed in Section 2.8, Appendix VI of the Permit Application. Please correct the typo.
 - ii. (Paragraph 8) Please provide the inspection frequency for the leachate breakouts, both routine and non-schedule inspections. The record keeping requirement of the inspection record.
6. (Section 2.2) On August 09, 2013 the SWS approved (DIN 19484) the County to operate the several non-disposal solid waste management units inside the Wayne County Landfill Facility according to the approved Operations Plan titled “ Operations Plan for: Sorting Tear-off Asphalt Shingles for Recycling, Passive Composting In Borrow Pit #1, and Inert Debris Storage & Processing in Borrow Pit #1 (DIN 19483). If the County intends to continued operation of these units, please provide the revised or updated Operations Plan; the location of each active unit must be shown the Facility Plan drawing.
7. (Section 2.2.1, On Page 44) Should the mobile homes that originate in Wayne County, rather than Alamance County be acceptable for disposal or recycling at the landfill facility? Please clarify.
8. (Section 2.2.7) Please provide additional information and address some concerns of the Water Quality Monitoring Plan.
 - i. Add the locations of the eleven (11) groundwater monitoring wells and three (3) surface water monitoring points to the operation plan drawings.
 - ii. The monitoring well MW-1 was plugged and abandoned (P&A) in June 14, 2013. The P&A record (GW-30 form) must be submitted to the SWS for a review and approval.
 - iii. Since the well MW-1R is replacing the MW-1, please provide the correct info throughout this Section.
9. (Section 2.2.12 Leachate Management Plan) Since leachate circulation is not proposed in the Permit Application, please state the generated leachate from the landfill unit will not be circulated.
10. (Section 2.2.13) The landfill gas gathered from the gas collection and control system is treating and generating electricity at the on-site Landfill Gas To Energy Unit. Please provide the following information of this unit:
 - i. The location of the unit including the flare which must be shown on the Facility Plan drawings.
 - ii. The ownership of the unit.
 - iii. The current and valid NC Air Quality Permit for the flare system and engine/generator unit(s).

11. (Section 2.5/Appendix III – Explosive Gas Control Plan – MSW & C&D) Since the SWS doesn't approve the new gas monitoring plan (referred email messages dated the March 14, 2014 [DIN 20729] & February 22, 2016 from Christin Ritter, the SWS Hydrogeologist to the County's representatives), the existing 25 gas monitoring wells installed around the landfill facility shall not be removed from the operation plan drawings. Please add all gas probes/wells to the operations plan drawings.
12. (Section 2.10 Engineering /Operations Drawings) Please make corrections on the following drawings:
 - i. (Drawing No. E2/Sheet No. 4 of 10)
 - a. Mark/note the MSWLF-Phase 4 on the drawing.
 - b. Are the fill contours of the in-place wastes for both MSWLF unit & C&DLF unit shown on the drawing generated from the latest survey result in 2015? If not, add the fill contours from the latest survey result in 2015 to the drawing.
 - ii. (Drawing No. E4/Sheet No. 6 of 10)
 - a. The drainage net shown in the "Typical Methane Gas Collection Well to Vent Conversion Detail" is 250 mil double bonded geosynthetic material which is inconsistent with that specified in the Section 3.6 (on Page 96) of the Closure Plan of the MSWLF unit .
 - b. The existing "Typical Cap Closure Details" are associated with the MSWLF unit. Please note the details are associated with the MSWLF unit.
 - c. Add the details of the final closure cover system and the passive venting system of the C&DLF unit to the drawing which must be consistent with the specification/descriptions described in the Closure Plan of the C&DLF unit.
 - iii. (Drawing No. E8/Sheet No. 10 of 10)
 - a. To avoid confusion, the "existing grade" should be the original grade prior to construction the landfill unit such as the one shown on Station 21+00 (MSW). The so call "existing grade" on other cross-sections should be the fill grades of in-place wastes which must be consistent with the latest survey result in 2015. Please replace the "existing grade" for a proper term for both MSWLF & C&DLF units.
 - b. The intermediate fill grades for Phase 4 at Station 16+00 (MSW) is approximately ranging from 194 feet (at Station 8+20) to 190 feet (at Station 13+20) and to 180 feet (at station 13+75). The cross-section - Station 16+00 (MSW) is not consistent with the grades shown on Drawing No. E2/Sheet No. 4 of 10.

Closure and Post Closure Plans

13. (Section 3.1) Please provide the following rule-required info:
 - i. Please state that the proposed post-settlement the slopes of the side and deck portions of the final cover system will be a minimum of 5 percent and a maximum of 25 percent [Rule 15A NCAC 13B .1627(c)(3)(A)]. The specific ranges of the surface slopes were approved in the PTC Application - Phase 3 (DIN 14016).
 - ii. Please also provide the maximum inventory of wastes, in the latest surveyed volume in cubic yard, of ever on-sit over the active life of the landfill facility [Rule 15A NCAC 13B .1629(b)(1)(C)].
14. (Section 3.6) This section indicates that the average annual discharge generated from the HELP model from 2004 Application is used for calculating the flow capacity of the proposed drainage net; however, the SWS has no record indicating that the referenced model results exist. Please provide the referenced HELP Model results.
15. (Section 3.7) Please add the typical details of the proposed closure venting system to the closure plan drawing.
16. (Section 4.1, Third paragraph) The landfill facility doesn't have any leachate collection tank, but a lagoon/surface impoundment to store leachate generated from the landfill units. Please make the correction to the description.

C&DLF Unit (9601-CDLF-1997)

Engineering Plan

17. (Section 1.1, General) The approved total gross capacity for the C&DLF unit is 2,736,883 CY, consisting of air space of 2,478,749 CY and the final cover system with a volume of 258,134 CY. The gross capacity is defined in the Rule A NCAC 13B .0537(e)(2)(B). To avoid any confusion, please
 - i. State the C&DLF facility has a permitted gross capacity, not air space capacity, of 2,736,883 CY consistent with the described Pashing Table on Page 111.
 - ii. Provide the estimate of maximum inventory of C&D waste (in-placed waste estimate) on-site in cubic yard based on the latest survey data (in 2015).
18. (Section 1.1.1) Please specify the thickness of each of the soil liner and the erosive later shall be measured perpendicular to the slope surface.
19. (Section 1.2) Please provide additional info of the LCIDLF unit:
 - i. Describe the bottom elevation of the waste is at least four (4) feet above the seasonal high water table according to February 2012 Evaluation Report [Rule 15A NCAC 13B .0565(1)(b)].

- ii. Describe the extent of the waste footprint (in acre) of the LCIDLF [Rule 15. 15A NCAC 13B .0565(3)(h)].
- iii. Describe the proposed excavation, grading, and/or final contours of the landfill slopes [Rule 15. 15A NCAC 13B .0565(3)(j)].
- iv. Describe the approved total capacity of the LCIDLF unit is 41,716 CY which consists of air space of 35,263 CY and final cover system of 6,453 CY.
- v. Describe the space utilization of the Phase 1 – the in-place waste volume and remaining capacity (in cubic yard).

Operations Plan

- 20. The groundwater underneath the unlined, closed MSWLF unit which is overlain by the active C&DLF unit is impacted by waste disposal activities; the implementation of the approved corrective action program to restore the groundwater quality is required by the Rule 15A NCAC 13B .0547(4), the Corrective Action Plan (DIN 8821), and the Permit Conditions stipulated in the Permit to Operate dated August 27, 2012 (DIN 16640). The Operation Plan must provide the following information and/or document.
 - i. Please provide the chronologic descriptions of the Corrective Action Plan (CAP) including the Sampling and Analysis Plan (SAP), the supplement, and/or revision since the CAP approval date of October 22, 2009. The approved documents or approval letters including the document identification number (DIN), date, and etc.
 - ii. Provide the findings and results according to the latest Corrective Action Evaluation Report (CAER). The CAER must be appended to the permit amendment application [Permit Condition No. 1, Attachment 3, of the Permit (DIN 16640)].
 - iii. The cost estimates for completion of the groundwater restoration/remediation based on the latest approved CAP. This cost for completion of the CAP must be a portion of the post-closure cost estimates.
- 21. The landfill gas collection and control system (LFGCCS) are installed and operated in the unlined, closed MSWLF unit, overlaid by the active C&DLF. Therefore,
 - i. The Operations Plan should describe the requirements of the operation, maintenance, inspection and decommission of the LFGCCS.
 - ii. The copy of the current, valid NC Air Quality permit No. 08885T03 shall be appended to the Operations Plan.
- 22. (Section 2.2) Please correct the typos and additional information:
 - i. (Paragraph 1 - Wastes Acceptance and Disposal Requirements) The Alamance County mentioned in the “item j” is likely a typographic error.

- ii. (Paragraph 2 –Cover Material Requirements) The referenced Paragraph 10 for record keeping requirement is likely a typo.
- iii. (Paragraph 9 e.) Please address the following concerns regarding the leachate breakout:
 - a. In addition to the weekly inspection, the non-schedule inspections should be executed after a major storm event or a drenched raining season pass.
 - b. The inspection log/record should be placed in the facility operating record.
 - c. Section 2.8/Appendix VI -The Corrective Action for Leachate Break-Outs of the Part 1 MSWLF might be applicable for the C&DLF unit as well. If so, please place the reference of Section 2.8/Appendix VI in the Paragraph 9.

Closure and Post Closure Plans

- 23. (Section 3.1) Please provide the additional information or correct the typographic errors:
 - i. The estimated schedule of the C&DLF closure is approximately 24 years according to the Air Space Calculation in Appendix A. Please correct the typo.
 - ii. Please also provide the maximum inventory of wastes, in the latest surveyed volume in cubic yard, of ever on-sit over the active life of the landfill facility [Rule 15A NCAC 13B .0543(d)(3)].
- 24. (Section 3.2) The largest area currently requiring a cap system for the C&DLF unit on top of the unlined, closed MSWLF (unit 2) shall be 40 acres according to Rule 15A NCAC 13B .0547(4) and consistent with the Section 3.7 – Closure Cost Estimates. Please revise the Section accordingly.
- 25. (Section 3.5) Please provide additional information regarding the proposed gas venting system:
 - i. Please provide the total number of the gas vents to be installed over the 40-acre closure cover system (the standard rate/frequency is one vent per acre).
 - ii. Please provide a typical detail of the proposed venting system to the Closure Plan drawings.
- 26. (Section 3.7) The costs associated with installation of the passive gas venting system described in the Section 3.5 is not completely included in the closure cost estimates.
 - i. Please add the costs for material & labor for geotextile, stone, and trenching & laying piping, and revise the final cost for the closure activities.
 - ii. Please note that the number of vents must be consistent with the response to the Comment No. 25.

27. (Section 4.1) Please describe the requirements of permit, operation, maintenance, & decommissioning of the existing LFGCCS at the landfill unit during the course of 30-year post-closure period.
28. (Section 4.2) Please add the cost for completing the approved Corrective Action Plan to restore the groundwater quality underneath the unlined, closed MSWLF unit [referring the Comment No. 20.iii. Please note that the aforementioned costs are excluded from the two million dollar – PACA/ NCGS 130A 295.2(h)].

Appendix A – Revised Facility Plan Drawings

29. Please add the following information to the drawing [Rules 15A NCAC 13B .0537(d) & .1619(d)]:
 - i. (Drawing No. F1/Sheet No. 3 of 8) Locations of the passive composting unit, inert debris processing & storage unit, tear-off shingle storage unit, and landfill gas to energy unit/flare station.
 - ii. (Drawing No. F2/Sheet No. 4 of 8) Mark/note the MSWLF-Phase 4 on the drawing.

Sincerely,



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Environmental Engineer
Division of Waste Management, NCDEQ

cc:
Wayne Sullivan, MESCO
Christine Ritter, DWM
Central File

Ed Mussler, Permitting Branch Supervisor
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